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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/852,032	KOBAYASHI, MASAHISA	
	Examiner	Art Unit	
	Clifford H Knoll	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to Applicant's communication filed 2/20/04. Claims 1-4 are currently pending.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

Claims 1 and 2 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 6285092) in view of SGS-Thomson ("IEEE1394 3-Port 400 Mbps Physical Layer (SBPH400-3)", Preliminary Data Sheet, SGS-Thomson Microelectronics, 16 March 1998).

Regarding claim 1, Kawahara discloses voltage detection means and code generation means for generating a code indicative of power information (e.g., col.4, lines 42-46), changing point detection means for detecting a change of the result of the determination output (e.g., col.5, lines 34-42), a physical layer circuit for being reset with an output signal and placing the code generated by the code generation means and indicative of the power class information in accordance with the IEEE 1394 standard. Kawahara does not expressly mention the specification details of the self-ID packet sent in response to bus reset; however, this feature is widely known as exemplified by SGS-Thomson. SGS-Thomson discloses self-identification in response to the occurrence of

bus resetting, indicative of the power class information into a self-ID packet to be used for transmission (e.g., §2.6, §2.7.2, Table 2.1).

Regarding claim 2, Kawahara also discloses determining whether or not an output voltage of power supplied from the serial bus is present, where the changing point detection means detects a change of the result of the determination of said voltage detection means only when said bus voltage detection means detects that the power supplied from said serial bus is higher than a predetermined voltage (e.g., col. 6, lines 25-34, col.7, lines 42-45).

It would be obvious to combine SGS-Thomson with Kawahara, because SGS-Thomson reveals, in the specification of a IEEE1394 physical layer implementation, the details of node operation in the IEEE1394 serial bus. This node operation is the subject of Kawahara's invention. Therefore it would be obvious to one of ordinary skill in the art to combine Kawahara with SGS-Thomson at the time the invention was made.

Claims 3 and 4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara in view of SGS-Thomson, further in view of Kobayashi (US 30030179719).

Regarding claim 3, Kawahara discloses voltage detection means and code generation means for generating a code indicative of power information (e.g., col.4, lines 42-46), changing point detection means for detecting a change of the result of the determination output (e.g., col.5, lines 34-42), a physical layer circuit for being reset with an output signal and placing the code generated by the code generation means and

indicative of the power class information in accordance with the IEEE 1394 standard. Kawahara does not expressly mention the specification details of the self-ID packet sent in response to bus reset; however, this feature is widely known as exemplified by SGS-Thomson. SGS-Thomson discloses self-identification in response to the occurrence of bus resetting, indicative of the power class information into a self-ID packet to be used for transmission (e.g., §2.6, §2.7.2, Table 2.1).

Kawahara discloses the desirability of automatically changing the power class setting of a 1394 node; however, he does not expressly mention the particular implementation of automatically changing by causing bus resetting to occur in response to an output signal from the changing point detection means. However, this feature is well known in the art as exemplified by Kobayashi. Kobayashi discloses the standard feature of the *power-on reset circuit* and bus resetting when the configuration changes, as in the "start of power supply in a connected device" (paragraph [0069]).

Regarding claim 4, Kawahara also discloses determining whether or not an output voltage of power supplied from the serial bus is present, where the changing point detection means detects a change of the result of the determination of said voltage detection means only when said bus voltage detection means detects that the power supplied from said serial bus is higher than a predetermined voltage (e.g., col. 6, lines 25-34, col.7, lines 42-45).

It would be obvious to combine Kawahara and SGS-Thomson with Kobayashi, because Kobayashi discloses the use of bus reset to automatically notify of configuration changes in the practice of the IEEE1394 serial bus implementation.

Kawahara's invention is directed toward providing automatic notification of a configuration change, specifically a power class change. A person of ordinary skill in the art would find it obvious to use Kobayashi, which details the means of automatic notification of configuration change, with Kawahari, which provides for a particular automatic configuration change in the practice of the IEEE1394 serial bus standard. Therefore it would be obvious to one of ordinary skill in the art to combine Kawahara and SGS-Thomson with Kobayashi at the time the invention was made.

Response to Arguments

Applicant's arguments filed 2/20/04 have been fully considered but they are not persuasive.

Regarding claim 1, Applicant argues that "the basic meritorious function of the invention is to provide additional IEEE 1394 compliant communication of power class information *beyond* the communications specified by IEEE 1394 in order to maintain consistency between the actual power supply configuration and the power class information recognized by the bus manager, *which IEEE 1394 does not guarantee*" (p. 8, emphasis original). It is the Examiner's contention that this is not claimed adequately to distinguish over Kawahara, and the IEEE standard as exemplified by SGS-Thomson. The recitation in independent claim 3 is another matter and is treated infra.

Applicant states that Kawahara teaches a device which "generates one of two codes ... depending on the voltage available from the local power supply and provided as flag 26" (p. 8); in fact, Kawahara teaches somewhat more. First, just to be clear, flag

26 provides the indication from the voltage detection means to the code generating means as to whether a local power supply is present. The actual code generated is not merely "one of two codes" but rather the standard power class code, and Kawahara teaches the device as a "power class setting circuit" (col. 7, lines 23-28, et seq.). This clearly establishes that Kawahara's device automatically sets the IEEE 1394 standard power class code (acknowledged as well by Applicant, see p. 8 at bottom).

Applicant further argues that changing point detection is not taught by Kawahara; that Kawahara "only discloses changing the code of the power class supplied to PHY in accordance with the existence of the voltage of power supply unit 2", but this is precisely a changing point detection. When the internal power supply (unit 2) is available, the change is detected and sent to the PHY circuit via power class bits (e.g., Figure 5, "52, 53, 54" is the power class field, sent via bus "33").

Applicant argues that Kawahara "does not mention a power-on reset circuit or causing the performance of a reset operation even in response to the power-on reset circuit [1], much less causing the same action to be performed in response to a detected change in the output of the voltage detection means [2]"; however the former [1] relies on the IEEE 1394 standard exemplified by SGS-Thomson, which citation supra clearly supports, and which is essentially acknowledged by Applicant in the sequel when addressing SGS-Thomson (p. 9, last Para). As to the latter [2] claim, the action "in response to a detected change" finds no support in the recitation. The recitation supporting bus resetting merely states that "bus resetting" is performed and that a "self-identification is performed in response *to the occurrence of bus resetting*" (claim 1).

This recitation fails to mention any responsiveness to "detected change" and reliance for anticipation of the claimed feature using the IEEE standard as exemplified by SGS-Thomson is deemed adequate.

Applicant points out SGS-Thomson documents are "data sheets for PHY" (p. 9); which is correct; its use in the rejection serves to exemplify certain details of the IEEE 1394 standard. As acknowledged by Applicant, SGS-Thomson "indicates details of the Self-ID packet" and the "reset ... specified by the IEEE 1394 standard" (p.9).

Regarding claims 1 and 3, Applicant argues, in Kawahara "there is no further circuit which detects the *point* at which the state of the local power supply is considered to change ... or which initiates a reset operation including code production and transmission when such a change occurs as clearly recited in the claims" and that "Examiner has not demonstrated how Kawahara et al. and SGS-Thomson answer recitation of the claims drawn to these features" (p. 10, emphasis original). However, quite clearly there is a point where the supply is considered to change; namely, when the power class output from the code generating means changes responsive to the application of internal power which is signaled to the code generating means via flag 26. This occurs through the application of voltage detection means (e.g., Fig. 4, "32" which connects to Fig. 5 "flag 26"). This leaves the issue of "change ... which initiates a reset operation." As expounded supra, the point of change initiating a reset operation is not supported by recitation in claim 1. Regarding claim 3, Examiner does not rely on Kawahara and SGS-Thomson to reject this claim.

Regarding claim 3 particularly, Applicant argues that Kobayashi "does not mitigate these deficiencies". In particular, Applicant argues that in Kobayashi, at the cited paragraph, the reset occurs "upon the '*start* of power in a connected device' (emphasis added) or the power-on reset, admitted in the present application to be known, rather than the use of an *additional* changing point detection means to cause *additional* reset operations" (p. 11). Especially, Applicant argues that "when the power supply *of a connected device* changes (from a bus power supply to a self power supply or vice-versa in order to *continue* operating, the bus connection configuration clearly does not change and, in accordance with Kobayashi et al., bus reset is not generated" (p. 11, emphasis original). However, the passage quoted by Applicant contradicts this. It is clear from paragraph [0069] that a reset occurs when "detecting a change in the connection configuration, such as start of power supply *in* a *connected* device, connection of a new device or disconnection of a connected device" (paragraph [0069], emphasis added). Taken as a whole, it is clear from this passage that Kobayashi contemplated changes of a power supply of a device *already connected* as causative. In light of this, Applicant's assertion that "renewal of a power class is not performed in Kobayashi et al. unless and until a change of connection configuration occurs, even if a power supply of a connected device changes" (p. 11) is incorrect. Kobayashi specifically allows for change of power supply in a *connected* device. Applicant's emphasis on the "*start* of power" (quoted supra) does not persuade; the start of power refers to the availability of power from an internal supply in a device already connected

and therefore already receiving externally power. This causes a change of power in Kobayashi from external to internal, and is, furthermore, repeatable.

Applicant further argues that "the prior art does not recognize or seek to address the problem of inconsistency of power class information recognized by the bus manager and the actual power supply operating state of connected devices"; however this is precisely the point of Kobayashi; namely, when a power supply in a connected device starts, a bus reset is caused, as expounded supra, and it precisely this result which successfully addresses the inconsistency.

Applicant further argues that the prior art "cannot provide evidence of a level of ordinary skill in the art which would support a conclusion of obviousness in regard to that subject matter which supports a meritorious function ... which is not guaranteed by that standard" and argues that application of Kobayashi is "strongly indicative of the impermissible use of hindsight by the Examiner or substantial confusion in regard to the claimed invention" (p. 12). It is seen however, that motivation is rather directly evident. The changes of a power supply of a device *already connected* changes the power class code in Kawahara's system. The change of a power supply of a device *already connected* causes a bus reset in Kobayashi's system. Applicant has suggested previously that Kobayashi "[i]n fact, ... describes a connection configuration of the IEEE 1394 standard" (p. 11). If this particular feature is provided by the standard, which seems to be the Applicant's interpretation, the advantages of practicing that standard pretty clearly motivates its application in Kobayashi's IEEE 1394 system and would furthermore tend to militate against the claim of impermissible hindsight. Irrespective of

the provisions of the standard, Kobayashi has been deemed to teach the well-known feature of causing a bus reset when the power supply source is changed in an IEEE 1394 system. Kawahari discloses an IEEE 1394 system where power supply sources may be changed and reported to the bus communication layer (PHY). The general purpose of the bus reset is to report configuration changes, so that the system is advantageously operable under the current configuration. Kobayashi identifies the internal power supply change of Kawahari as a configuration change and thus the person of ordinary skill in the art would be motivated to apply Kobayashi. Applicant's remarks would suggest that configuration changes refer strictly to topology or connection changes of the bus, and indeed this is a common kind of applicable change; however, Kobayashi is important in establishing power source change as a example of configuration change that advantageously engenders a bus reset. Regarding interpretation of the claimed invention, Examiner is required to use the broadest reasonable interpretation consistent with the specification. Examiner confirms this in the rejection above; hopefully the discussion above makes the interpretation relied upon clear.

Thus rejection of claims 1-4 is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 703-305-8656. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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